U. S. Application No.: 10/539,381

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1. -18. (canceled).

19. (currently amended): A method of manufacturing an image display device which

comprises an image display panel having one or more image display cells isolated from each

other by partition walls, in which two kinds of liquid powders composed of a solid material

stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a

pale bright color and a deep dark color and having different charge characteristics, or, two kinds

of particles having a pale bright color and a deep dark color and having different charge

characteristics, are sealed between a transparent substrate and an opposed substrate, and, in

which the liquid powders or the particles, to which an electrostatic field produced by a pair of

electrodes having different potentials is applied, are made to fly and move so as to display a

monotone image, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image

display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition

walls in the filling;

stacking the transparent substrate and the opposed substrate via the partition walls and

applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere

between the transparent substrate and the opposed substrate uniform; and

U. S. Application No.: 10/539,381

connecting a circuit for displaying the image to the electrode so as to form a module, wherein an apparent volume in a maximum floating state of the liquid powders is two times or more than that in non-floating state.

20. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a color other than white color and a black color and having different charge characteristics, or, two kinds of particles having a color other than white color and a black color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a color image, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

U. S. Application No.: 10/539,381

connecting a circuit for displaying the image to the electrode so as to form a module, wherein an apparent volume in a maximum floating state of the liquid powders is two times or more than that in non-floating state.

21. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a white color and a black color and having different charge characteristics, or, two kinds of particles having a white color and a black color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a color image via a color filter provided to the transparent substrate constituting a front panel, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling step;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

U. S. Application No.: 10/539,381

connecting a circuit for displaying the image to the electrode so as to form a module, wherein an apparent volume in a maximum floating state of the liquid powders is two times or more than that in non-floating state.

22. (canceled).

23. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a pale bright color and a deep dark color and having different charge characteristics, or, two kinds of particles having a pale bright color and a deep dark color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a monotone image, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

AMENDMENT UNDER 37 C.F.R. § 1.116

U. S. Application No.: 10/539,381

7 C.F.R. § 1.116 Attorney Docket No.: Q88650

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 19, wherein a time change

of an apparent volume of the liquid powders satisfies the following formula:

 $V_{10}/V_5 > 0.8$;

wherein, V_5 indicates the apparent volume (cm³) of the liquid powders after 5 minutes from the maximum floating state; and V_{10} indicates the apparent volume (cm³) of the liquid powders after

10 minutes from the maximum floating state.

monotone image, wherein the method comprises:

24. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a pale bright color and a deep dark color and having different charge characteristics, or, two kinds of particles having a pale bright color and a deep dark color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling;

U. S. Application No.: 10/539,381

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 19, wherein an average particle diameter d(0.5) of a particle component constituting the liquid powders is 0.1 - 20 µm.

25. (canceled).

26. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a pale bright color and a deep dark color and having different charge characteristics, or, two kinds of particles having a pale bright color and a deep dark color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a monotone image, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling;

U. S. Application No.: 10/539,381

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 19, wherein a difference between surface charge densities of the two kinds of particles measured by utilizing same carrier and in accordance with a blow-off method is 5 μ C/m² -150 μ C/m² in an absolute value.

27. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a pale bright color and a deep dark color and having different charge characteristics, or, two kinds of particles having a pale bright color and a deep dark color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a monotone image, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling;

U. S. Application No.: 10/539,381

stacking the transparent substrate and the opposed substrate via the partition walls and

applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere

between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The

method of manufacturing the image display device according to claim 19, wherein the particles

are particles in which the maximum surface potential, in the case that the surface of particles is

charged by a generation of Corona discharge caused by applying a voltage of 8 KV to a Corona

discharge device deployed at a distance of 1 mm from the surface, is 300 V or greater at 0.3

second after the discharge.

28. (canceled).

29. (canceled).

30. (currently amended): A method of manufacturing an image display device which

comprises an image display panel having one or more image display cells isolated from each

other by partition walls, in which two kinds of liquid powders composed of a solid material

stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a

color other than white color and a black color and having different charge characteristics, or, two

kinds of particles having a color other than white color and a black color and having different

charge characteristics, are sealed between a transparent substrate and an opposed substrate, and,

in which the liquid powders or the particles, to which an electrostatic field produced by a pair of

electrodes having different potentials is applied, are made to fly and move so as to display a

color image, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 20, wherein a time change of an apparent volume of the liquid powders satisfies the following formula:

$$V_{10}/V_5 > 0.8$$
;

wherein, V_5 indicates the apparent volume (cm³) of the liquid powders after 5 minutes from the maximum floating state; and V_{10} indicates the apparent volume (cm³) of the liquid powders after 10 minutes from the maximum floating state.

31. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a color other than white color and a black color and having different charge characteristics, or, two kinds of particles having a color other than white color and a black color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of

U. S. Application No.: 10/539,381

electrodes having different potentials is applied, are made to fly and move so as to display a color image, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 20, wherein an average particle diameter d(0.5) of a particle component constituting the liquid powders is 0.1 - 20 µm.

32. (canceled).

33. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a color other than white color and a black color and having different charge characteristics, or, two kinds of particles having a color other than white color and a black color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of

U. S. Application No.: 10/539,381

electrodes having different potentials is applied, are made to fly and move so as to display a color image, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 20, wherein a difference between surface charge densities of the two kinds of particles measured by utilizing same carrier and in accordance with a blow-off method is $5 \mu C/m^2 - 150 \mu C/m^2$ in an absolute value.

34. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a color other than white color and a black color and having different charge characteristics, or, two kinds of particles having a color other than white color and a black color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of

U. S. Application No.: 10/539,381

electrodes having different potentials is applied, are made to fly and move so as to display a color image, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 20, wherein the particles are particles in which the maximum surface potential, in the case that the surface of particles is charged by a generation of Corona discharge caused by applying a voltage of 8 KV to a Corona discharge device deployed at a distance of 1 mm from the surface, is 300 V or greater at 0.3 second after the discharge.

- 35. (canceled).
- 36. (canceled).
- 37. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a white color and a black color and having different charge characteristics, or, two kinds of

particles having a white color and a black color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a color image via a color filter provided to the transparent substrate constituting a front panel, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling step;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 21, wherein a time change of an apparent volume of the liquid powders satisfies the following formula:

$$V_{10}/V_5 > 0.8$$
;

wherein, V₅ indicates the apparent volume (cm³) of the liquid powders after 5 minutes from the maximum floating state; and V_{10} indicates the apparent volume (cm³) of the liquid powders after 10 minutes from the maximum floating state.

38. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each

U. S. Application No.: 10/539,381

other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a white color and a black color and having different charge characteristics, or, two kinds of particles having a white color and a black color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a color image via a color filter provided to the transparent substrate constituting a front panel, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling step;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 21, wherein an average particle diameter d(0.5) of a particle component constituting the liquid powders is $0.1 - 20 \mu m$.

39. (canceled).

40. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each

U. S. Application No.: 10/539,381

other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a white color and a black color and having different charge characteristics, or, two kinds of particles having a white color and a black color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a color image via a color filter provided to the transparent substrate constituting a front panel, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling step;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 21, wherein a difference between surface charge densities of the two kinds of particles measured by utilizing same carrier and in accordance with a blow-off method is 5 μ C/m² -150 μ C/m² in an absolute value.

41. (currently amended): A method of manufacturing an image display device which comprises an image display panel having one or more image display cells isolated from each

U. S. Application No.: 10/539,381

other by partition walls, in which two kinds of liquid powders composed of a solid material stably floating as a dispersoid in a gas and exhibiting a high fluidity in an aerosol state, having a white color and a black color and having different charge characteristics, or, two kinds of particles having a white color and a black color and having different charge characteristics, are sealed between a transparent substrate and an opposed substrate, and, in which the liquid powders or the particles, to which an electrostatic field produced by a pair of electrodes having different potentials is applied, are made to fly and move so as to display a color image via a color filter provided to the transparent substrate constituting a front panel, wherein the method comprises:

filling an amount of the liquid powders or the particles in spaces constituting the image display cells isolated by the partition walls;

removing unnecessary liquid powders or unnecessary particles remaining on the partition walls in the filling step;

stacking the transparent substrate and the opposed substrate via the partition walls and applying a sealing agent at a peripheral portion of the substrate so as to make an atmosphere between the transparent substrate and the opposed substrate uniform; and

connecting a circuit for displaying the image to the electrode so as to form a module The method of manufacturing the image display device according to claim 21, wherein the particles are particles in which the maximum surface potential, in the case that the surface of particles is charged by a generation of Corona discharge caused by applying a voltage of 8 KV to a Corona discharge device deployed at a distance of 1 mm from the surface, is 300 V or greater at 0.3 second after the discharge.

AMENDMENT UNDER 37 C.F.R. § 1.116 U. S. Application No.: 10/539,381 Attorney Docket No.: Q88650

42. (canceled).